

REMARKS

This amendment is submitted in reply to the non-final Office Action mailed on September 14, 2005. Claims 1-19 are pending in this application. In the Office Action, Claims 7-16 and 18-19 are rejected under 35 U.S.C. §112, second paragraph, Claim 1 is rejected under 35 U.S.C. §102 and Claims 1-3, 4-11, 13 and 14-19 are rejected under 35 U.S.C. §103. In response Claims 1, 10, 13, 16 and 18 have been amended. This amendment does not add new matter. In view of the amendment and/or for the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

In the Office Action, Claims 7-16 and 18-19 is rejected under 35 U.S.C. §112, second paragraph, as allegedly being incomplete for omitting essential steps. Specifically, the Patent Office alleges that the omitted essential steps include: removal of the biomass by centrifugation, removal of insoluble materials by fine filtration and removal of volatile malodorous materials and Claim 7 includes phrase "without purification" thereby preventing the essential steps from being added to Claim 7.

Applicants respectfully disagree with the Patent Office's assertion regarding the term "purification" and believe it is based on a misunderstanding of the present invention. For example, the phrase "without purification" was to emphasize the distinction over the prior art (discussed in the specification) in which hexane is used to extract the fungal oils and in turn has to be removed before the oils can be incorporated into food products. Further, the hexane dissolves other components present in the biomass and undesirable in food products that have to be removed from the fungal oils. See, specification, page 1, line 16 to page 2, line 17. The Patent Office points to the fact that in the description various steps such as separation of biomass from the oil and filtration of the oil are listed but are not recited in the claims and could be considered purification steps. Nevertheless, the fact is that the centrifuging to separate the oil is comprehended in the expression "separating the oil containing the fatty acid(s) from the biomass residue." It is explained in the specification that any known process may be used. See, specification, page 6, lines 24-28. The deodorizing step is part of Claim 7 contrary to the Patent Office's assertions. Claim 12 relates to a preferred way of carrying out the deodorization. The fine filtration is a preferred and not essential element and is therefore the subject of Claim 13.

Based on at least these noted reasons, Applicants believe that Claims 7-16 and 18-19 fully comply with 35 U.S.C. §112, second paragraph.

In the Office Action, Claims 16 and 18 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Patent Office alleges that the term “dry form” is unclear. In response, Applicants have amended Claims 16 and 18 to address the informalities cited by the Patent Office. Based on at least these noted reasons, Applicants believe that Claims 16-18 fully comply with 35 U.S.C. §112, second paragraph.

In the Office Action, Claim 10 is rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Patent Office alleges that the terms “gentle conditions,” “moderate temperature,” and “inert atmosphere” are unclear. In response, Applicants have amended Claim 10 to address the informalities cited by the Patent Office. Further, Applicants respectfully submit that the term “inert atmosphere” is clearly understood by one having ordinary skill in the art, for example, to mean an atmosphere that is not readily reactive with other chemical elements. Based on at least these noted reasons, Applicants believe that Claim 10 fully complies with 35 U.S.C. §112, second paragraph.

In the Office Action, Claim 12 is rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Patent Office alleges that the term “optionally” makes Claim 12. In response, Applicants respectfully submit that the metes and bounds of Claim 12 are clearly understood by one having ordinary skill in the art. For example, the term “optionally” either means it can be included or not included. “Optionally” is not exemplary claim language as stated in MPEP 2173.05(d) because it does not refer to a range of unknown choices as the term “for example” refers to. In Claim 12, “optionally” means that deodorizing can or does not have to be assisted by vacuum. There are no other unknown conclusions to be obtained from use of the term “optionally” in this claim. Indeed, the term “optionally” is used in the claims of numerous issued U.S. Patents. Based on at least these noted reasons, Applicants believe that Claim 12 fully complies with 35 U.S.C. §112, second paragraph.

In the Office Action, Claim 13 is rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Patent Office alleges that the terms “final” in reference to filtration is unclear. In response, Applicants have amended Claim 13 to recite “fine” as originally intended instead of “final.” This amendment is supported in the specification, for example, at page 6, lines 29-33. Based on at least these noted reasons, Applicants believe that Claim 13 fully complies with 35 U.S.C. §112, second paragraph.

Accordingly, Applicants respectfully request that the rejection of Claims 7-16 and 18-19 under 35 U.S.C. §112 be withdrawn.

In the Office Action, Claims 1-2, 4-6 and 17 are rejected under 35 U.S.C. §102(b) as anticipated by oil used to fry fish (“*fish fry*”). Applicants respectfully disagree with and traverse this rejection for at least the reasons set forth below.

Applicants respectfully disagree with the Patent Office’s assertion regarding *fish fry*. For example, *fish fry* does not disclose or suggest that at least 60% by weight of the long-chain polyunsaturated fatty acids present in the biomass will be transferred to the oil but that less than 10% of phosphorus that is present in the biomass will be transferred the oil as required by Claim 1. Moreover, Applicants respectfully submit that in the fermentation industry (where one skilled in the art would be) the term “biomass” has a specialized meaning and would be clear to one skilled in the art that fish is not included. Nevertheless, Applicants have amended Claim 1 to recite, in part, biomass obtained from the culture of a microorganism. This amendment is supported in the specification, for example, at page 2, lines 20-34.

For the reasons discussed above, Applicants respectfully submit that Claim 1 and Claims 2, 4-6 and 17 that depend from Claim 1 are novel, nonobvious and distinguishable from the cited reference. Accordingly, Applicants respectfully request that the rejection of Claims 1-2, 4-6 and 17 under 35 U.S.C. §102(b) be withdrawn.

In the Office Action, Claims 1-3, 5-9 and 14-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,773,075 to Todd (“*Todd*”) in view of U.S. Patent No. 4,235,795 to Cohen (“*Cohen*”) and EP 0726321 to Barclay (“*Barclay*”). Claims 1-2, 4-9 and 14-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Todd* in view of *Cohen* and

U.S. Patent No. 4,960,795 to Salte et al. ("*Salte*"). Applicants believe these rejections are improper and respectfully traverse them for at least the reasons set forth below.

Independent Claims 1 and 7 recite, in part, fungal oils that are obtained from biomass obtained from a culture of microorganisms. Applicants respectfully submit that there is no suggestion or motivation to combine the cited references to obtain the present claims, and even if combinable, all of the claimed elements are not taught or suggested by the cited references.

Applicant respectfully submits that there is no suggestion or motivation to combine the cited references to obtain the present claims. For example, *Todd* is directed to edible oils that are used to extract carotenoid pigments from caspasicum species. See, *Todd*, column 1, lines 6-9. *Cohen* is directed to the processing of oil used to extend its life by using a mineral to selectively adsorb the saturated fatty acids leached from food that is cooked in the oil so that the saturated fatty acids do not build up in the cooking oil and cause it to impart bad flavors to food that is cooked in it as the oil ages. See, *Cohen*, column 1, lines 44-62. *Barclay* is directed to a process for producing arachidonic acid. See, *Barclay*, page 3, lines 9-12. *Salte* is directed to feed additives used to prevent or treat cold water diseases in farmed fish. See, *Salte*, Abstract. Accordingly, one having ordinary skill in the art would not be motivated to combine *Todd*, *Cohen* and *Barclay* or *Todd*, *Cohen* and *Salte* to arrive at the present claims.

Moreover, it is highly unlikely that one having skill in the art of production of polyunsaturated fatty acids ("PUFA") by fermentation of fungal biomass would begin by using a reference relating to the extraction of carotenoid pigments (*Todd*) or from one relating to deep fat frying (*Cohen*) when attempting to improve the process for extracting PUFA from the biomass. Thus, there is no direction provided in the cited references suggesting how they should be combined to obtain the present claims.

Applicants respectfully submit that the Patent Office has improperly applied hindsight reasoning by selectively piecing together teachings of each of the references in an attempt to recreate what the claimed invention discloses. As the Federal Circuit explained, "the mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, at 1783-17. One cannot use "hindsight reconstruction to pick and choose among isolated

disclosures in the prior art” to re-create the claimed invention. *In re Fine*, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988).

Applicant also respectfully submits that, even if combinable, the cited references do not disclose or suggest all of the claimed elements. For example, the cited references fail to disclose or suggest the long-chain polyunsaturated fatty acids are incorporated such that at least 60% by weight of the long-chain polyunsaturated fatty acids present in the biomass are present in the oil but that less than 10% of phosphorus that is present in the biomass is present in the oil as required, in part, by Claim 1. Further, the cited references fail to disclose or suggest transferring the long-chain polyunsaturated fatty acid(s) in the form of triacylglycerols to the carrier as required, in part, by Claim 7. Moreover, the Patent Office has not provided support for every element of Claims 1 and 7 from the cited references.

For the reasons discussed above, the combination of *Todd* in view of *Cohen* and *Barclay* or *Todd* in view of *Cohen* and *Salte* is improper. Moreover, even if combinable, the cited references do not teach, suggest, or even disclose all of the elements of independent Claims 1 and 7 and Claims 2-6, 8-9 and 14-19 that depend from these claims, and thus, fail to render the claimed subject matter obvious for at least these reasons.

Accordingly, Applicants respectfully request that the obviousness rejections with respect to Claims 1-9 and 14-19 be reconsidered and the rejections be withdrawn.

Claims 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Todd* in view of *Cohen*, *Barclay* and U.S. Patent No. 5,840,945 to Tsujiwaki (“*Tsujiwaki*”) or over *Todd* in view of *Cohen*, *Salte* and *Tsujiwaki*. Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Todd* in view of *Cohen* and *Barclay* and EP 0612725A1 to Rose et al. (“*Rose*”) or over *Todd* in view of *Cohen*, *Salte* and *Rose*. Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Todd* in view of *Cohen* and *Barclay* and U.S. Patent No. 5,407,957 to Kyle et al. (“*Kyle*”) or over *Todd* in view of *Cohen*, *Salte* and *Kyle*. Applicants respectfully submit that the patentability of Claim 7 renders moot the obviousness rejection of Claims 10-11 and 13 that depend from Claim 7. In this regard, the cited art fails to teach or suggest the elements of Claims 10-11 and 13 in combination with the novel elements of Claim 7.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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